

## CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

### **Listing of Claims:**

1-52. (Canceled)

53. (Currently amended) A method for eliciting an immune response against an A/E pathogen, or component thereof, in an animal comprising administering to the animal an effective amount of the a composition comprising:

i) a polypeptide which comprises an amino acid sequence substantially identical to the sequence of SEQ ID NOS: 22-24 or a fragment or variant thereof,

ii) a nucleic acid molecule which comprises a nucleotide sequence substantially identical to the sequence of SEQ ID NOS: 1-3 or a fragment or variant thereof,

iii) a nucleic acid molecule encoding a polypeptide which comprises an amino acid sequence substantially identical to the sequence of SEQ ID NOS: 22-24 or a fragment or variant thereof, or

iv) a cell culture supernatant which comprises a polypeptide comprising an amino acid sequence substantially identical to the sequence of SEQ ID NOS: 22-24, or a fragment or variant thereof, of any one of claims 1-7 or 15-18, or comprising administering to the animal an effective amount of the bacterium of any one of claims 8-14, thereby eliciting an immune response in the animal.

54. (Currently amended) A method for reducing colonization of an A/E pathogen in an animal, the method comprising administering to the animal an effective amount of the a composition comprising:

i) a polypeptide which comprises an amino acid sequence substantially identical to the sequence of SEQ ID NOS: 22-24 or a fragment or variant thereof,

ii) a nucleic acid molecule which comprises a nucleotide sequence substantially identical to the sequence of SEQ ID NOS: 1-3 or a fragment or variant thereof,

iii) a nucleic acid molecule encoding a polypeptide which comprises an amino acid sequence substantially identical to the sequence of SEQ ID NOs: 22-24 or a fragment or variant thereof, or

iv) a cell culture supernatant which comprises a polypeptide comprising an amino acid sequence substantially identical to the sequence of SEQ ID NOs: 22-24, or a fragment or variant thereof, thereby of any one of claims 1-7 or 15-48, or comprising administering to the animal an effective amount of the bacterium of any one of claims 8-14, hereby reducing colonization of the A/E pathogen in the animal.

55. (Currently amended) A method for reducing shedding of an A/E pathogen in an animal comprising administering to the animal an effective amount of the a composition comprising:

i) a polypeptide which comprises an amino acid sequence substantially identical to the sequence of SEQ ID NOs: 22-24 or a fragment or variant thereof,

ii) a nucleic acid molecule which comprises a nucleotide sequence substantially identical to the sequence of SEQ ID NOs: 1-3 or a fragment or variant thereof,

iii) a nucleic acid molecule encoding a polypeptide which comprises an amino acid sequence substantially identical to the sequence of SEQ ID NOs: 22-24 or a fragment or variant thereof, or

iv) a cell culture supernatant which comprises a polypeptide comprising an amino acid sequence substantially identical to the sequence of SEQ ID NOs: 22-24, or a fragment or variant thereof, of any one of claims 1-7 or 15-48, or comprising administering to the animal an effective amount of the bacterium of any one of claims 8-14, thereby reducing shedding of the A/E pathogen in the animal.

56. (Currently amended) The method of claim 53, any one of claims 53 through 55 wherein the animal is a ruminant.

57. (Original) The method of claim 56, wherein the ruminant is a bovine or ovine subject.

58. (Original) The method of claim 53 ~~any one of claims 53 through 55~~, wherein the animal is a human.

59-70. (Cancelled)

71. (Currently amended) The method of ~~any one of claims 49 through 70~~ claim 53, wherein the A/E pathogen is enterohemorrhagic *E. coli* (EHEC), enteropathogenic *E. coli* (EPEC), or *Citrobacter rodentium*.

72. (Original) The method of claim 71 wherein the EHEC is EHEC 0157:H7 or EHEC 0157:NM.

73. (Original) The method of claim 71 wherein the EPEC is EPEC 0127:H6.

74-85. (Cancelled)

86. (New) The method of claim 53, wherein the composition is provided in combination with a physiologically acceptable carrier.

87. (New) The method of claim 53, wherein the polypeptide comprises 20% of the cell protein present in the composition.

88. (New) The method of claim 53, wherein the composition further comprises a EspA, EspB, EspD, EspP, Tir, Shiga toxin 1, Shiga toxin 2, or intimin polypeptide.

89. (New) The method of claim 53, wherein the composition further comprises an adjuvant.

90. (New) The method of claim 53, further comprising treating or preventing infection by the A/E pathogen.
91. (New) The method of claim 54, wherein the animal is a ruminant.
92. (New) The method of claim 55, wherein the animal is a ruminant.
93. (New) The method of claim 54, wherein the animal is a human.
94. (New) The method of claim 55, wherein the animal is a human.